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| EXAMINER |
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RUDDOCK, ULA CORINNA

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| ART UNIT | PAPER NUMBER |
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1771

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05/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/601,615

Applicant(s)

BYMA ET AL.

Examiner

Ula C. Ruddock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 21-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 6, 2007, has been entered.
2. The Examiner has carefully considered Applicant's amendment and accompanying response filed March 6, 2007. All previously set forth rejections have been maintained.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

4. The declaration under 37 CFR 1.132 filed March 6, 2007, is insufficient to overcome the rejection of the claims based upon Arthurs (US 5,460,870) and Michael (US 2003/0121989) as set forth in the last Office action because: Applicant argues that the supplemental Declaration provides evidence that companies where the Declarant worked as well as other competing companies have been working on solving the need to reduce the overall weight of vehicles as early as 1993 and to reduce the amount of glass fiber used as early as 1993 and on solving the need to recycle automotive parts as early as 1993. However, while the Declaration in which these statements were made has been fully considered, the evidence, taken as a whole, does not overcome the prima facie case of obviousness set forth above.

Further, with regard to the issue of long felt need and how much work has been done to solve various problems associated with automotive headliners, while the Declaration states that the company where the Declarant worked and competitors of that company worked on the problem, the scope of the work, how many companies this entailed, the amount of attention and resources which were focused on the problem, etc., has not been set forth in the form of factual evidence. The supplemental Declaration states that in the opinion of the Declarant that others skilled in the art would not have been able to solve the problems if they were familiar with the teachings of Arthurs and Michael. In assessing the probative value of an expert opinion, the examiner must consider the nature of the matter sought to be established, the strength of any opposing evidence, the interest of the expert in the outcome of the case, and the presence or absence of factual support for the expert's opinion." MPEP 716.01(d). Thus, in evaluating the opinions of the Declaration, it is noted that: 1) the nature of the matter to be established is whether one of ordinary skill in the art would have been able to solve the problems if they were familiar with the prior art references applied; 2) the opposing evidence is the prior art reference; 3) the interest of the expert is that he is the applicant and inventor; 4) there is no factual evidence to support the expert's opinion. Therefore, while it is acknowledged that the Declarant is highly knowledgeable in the field, the opinion evidence, while it has been carefully considered and evaluated in light of the factors set forth above, is not sufficient, when considered with the totality of the record, to overcome the art rejection of record.

The Declaration states that the claimed structure has an unexpected benefit of being able to be reused after incineration. However, "The fact that appellant has recognized another

advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious." *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd.Pat. App. & Inter. 1985). The attached press release noting the awarding of the Most Innovative Use of Plastics in the Environmental Category by the Society of Plastics Engineers has been carefully considered. However, it is noted that the criteria used in deciding what product would be awarded this distinction is not of record and it is not clear that this criteria would be the same as the criteria used to determine novelty and obviousness by the PTO.

Further, although this distinction has been considered in combination with all the evidence and arguments presented by Applicant, the record as whole supports the rejection of the claims as obvious over the combination of Arthurs and Michael and therefore, the rejection has been maintained.

Double Patenting

5. Claims 1-9 and 21-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-5, and 18-30 of copending Application No. 10/440708. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Rejection is maintained.

6. Claims 1-9 and 21-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 and 19-29 of copending

Application No. 10/440800. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Rejection is maintained.

7. Claims 1-9 and 21-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-7, and 22-34 of copending Application No. 10/440889. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Rejection is maintained.

Claim Rejections - 35 USC § 103

8. Claims 1, 3, 4, 22 and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) in view of Michael (US 2003/0121989). Arthurs discloses a laminate suitable for use as a headliner comprising polyurethane foam core layer which is bonded by an adhesive to glass fiber reinforcing layers (col 1, ln 41-50). Arthurs discloses the claimed invention except for the teaching that a reinforcement layer comprising carbon fibers is provided adjacent to the polyurethane foam layer.

Michael discloses a headliner [0002] comprising fibers selected from a group consisting of natural fibers, synthetic fibers, and mixtures thereof. Natural fibers include sisal, hemp, and kenaf

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fibers and synthetic fibers include carbon fibers [0007]. The resinous binder that binds the fibers together includes a thermoset resin including a urethane resin binder [0010]. It would have been obvious to one having ordinary skill in the art to have used Michael's carbon fibers and thermoset binder in the laminate of Arthurs, motivated by the desire to create a laminate having enhanced lamination strength. Regarding claim 24, it also would have been obvious to one having ordinary skill in the art to have used Michael's natural fibers and thermoset binder (i.e. urethane) in place of Arthurs' glass fibers, motivated by the desire to create a laminate that has increased strength yet maintains its lightweight properties. Regarding claim 26, it is the Examiner's position that the use of Michael's carbon fibers would result in a laminate comprising fibers with a degradation point above the incineration point of the other materials of the laminate.

With regard to the new claims, it is noted that Arthurs teaches a material wherein the core density and thicknesses are within the claimed ranges. Further, with regard to the limitations regarding the claimed tensile strength of the basalt fiber, it is reasonable to presume that since the fibers are made of the same material they would necessarily have the claimed strength. With regard to the limitation that the laminate is "adapted to be incinerated" such that the laminate is reduced to ash and basalt fiber, since no structural changes are set forth with regard to the claimed adapting, it is reasonable to presume that the structure of Arthurs as modified by Michael would meet this limitation.

Rejection is maintained.

9. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) and Michael (US 2003/0121989), as shown above, and further in view of Michael

(US 2003/0124271). Arthurs and Michael '989 disclose the claimed invention except for the teaching that the carbon fibers are produced from petroleum pitch and that the carbon fibers comprises at least 50% of the total weight of the mat. Michael (US 2003/0124271) discloses a headliner [0028 and 0052] comprising a mat made of carbon fibers [0007]. The carbon fibers can be pitch carbon and be present in an amount from about 10-50% by weight based on the total weight of the mat [0038]. It would have been obvious to one having ordinary skill in the art to have used Michael's 50% pitch carbon as the carbon fibers in Arthurs and Michael '989, motivated by the desire to create a headliner that is lightweight and less costly to manufacture.

Rejection is maintained.

10. Claims 6-8, 21, 23, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) and Michael (US 2003/0121989), as shown above, and further in view of Fletemier et al. (US 6,156,682). Arthurs and Michael disclose the claimed invention except for the teaching of the additional layers in the headliner as taught in the present invention.

Fletemier et al. (US 6,156,682) disclose a vehicle headliner comprising a fibrous core, a thermosetting resin, chopped fibers applied to opposite sides of the core layer, a decorative layer, and an impervious film and finish scrim applied to the opposite side of the core (col 2, ln 3-10). The fibrous reinforcement layers comprise basalt fibers (col 4, ln 16-18). As seen in Figure 1, reference point 22 is a decorative covering, reference point 19 is a polymer film, reference points 14 and 16 are fibrous reinforcement layers, reference point 12 is the core, reference point 18 is a polymer film, and reference point 20 is a scrim. The adhesive resin is an elastomeric thermosetting resin, preferably a curable urethane (col 5, ln 19-20). It would have been obvious to one having

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ordinary skill in the art to have used Fletemier's scrim layer in the laminate of Arthurs and Michael, motivated by the desire to create a laminate with increased strength. It also would have been obvious to have used Fletemier's basalt fibrous reinforcement layers in the laminate of Arthurs and Michael, motivated by the desire to create a headliner that is lightweight and less costly to manufacture.

Rejection is maintained.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) and Michael (US 003/0121989) and Fletemier et al. (US 6,156,682) as applied to claim 6 above, and further in view of McConnell et al. (US 4,812,186). Arthurs and Michael and Fletemier et al. disclose the claimed invention except for the teaching that there is a layer of adhesive interposed between the core and the first and second structural reinforcement layers. McConnell et al. (US 4,812,186) disclose a headliner (col 1, ln 11-13) comprising a first polyurethane adhesive (col 2, ln 19-30) and a second adhesive made of a similar adhesive composition as that applied in the first adhesive (col 3, ln 1-11). The adhesive penetrates the reinforcing layers and serves to the reinforcing layer, when cure, to the core material. It would have been obvious to one having ordinary skill in the art to have used McConnell's adhesive layers in the headliner of Arthurs and Michael and Fletemeir et al., motivated by the desire to create a headliner that has increased structural integrity and dimensional stability.

Rejection is maintained.

Response to Arguments

12. Applicant's arguments filed June 29, 2006 and August 16, 2006, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues the combination of the Arthurs and Michael references and that only use of improper hindsight reasoning would result in the combination proposed by the Examiner.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Therefore, the rejections are maintained.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

UCR

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